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# NEW OR LITTLE-KNOWN SPECIES OF THE GENUS LITHOCOLLETIS OCCURRING IN JAPAN

(LEPIDOPTERA : GRACILLARIIDAE)

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Up to the present time fifty-five species of the genus *Lithocolletis* Hübner have been known to occur in Japan as stated in my previous paper<sup>1)</sup>. In the present paper will be described six new species, one of which was previously misidentified by myself (1963) as *L. tristrigella* Haworth. Furthermore, notes on some other species will be given herewith.

Before going further I express my sincere acknowledgement to Prof. C. Watanabe of Hokkaido University for his kindness in giving constant encouragement, and to Dr. H. Kuroko and Mr. T. Yasuda, both of Osaka Prefectural University, and Mr. G. Deschka of Austria for their kindness in offering the valuable material used in the present paper.

## *Lithocolletis tenebriosa*, sp. nov. ( Fig. 8, 1)

♂ & ♀. Alar expanse, 6.0–6.5 mm. Face, head and palpi brilliant grayish-white, scattered with a few blackish-brown scales; tuft of head white, mixed with dark brown hairs antero-laterally. Antenna grayish-white, annulated with black broadly. Thorax dark golden-brownish, with three narrow, white stripes. Legs brilliant whitish; fore tibia blackish inside; mid tibia blackish outside; hind tibia with a dark brown apical blotch on outside; all tarsal segments broadly ringed with black apically. Fore wing dark golden-brown, with a medio-basal, four or five costal and three hind streaks narrow and white, all the streaks being internally margined with black, dense irrorations. Medio-basal streak occupying basal  $\frac{2}{5}$  of wing along fold, sinuate, usually interrupted by black irrorations at its apical  $\frac{1}{3}$  and sometimes also at basal  $\frac{1}{3}$ . First costal streak placed at basal  $\frac{1}{4}$  of wing, oblique outwardly, sometimes touching apex of medio-basal one; second costal streak opposite to first hind one at middle of wing, sometimes joined with the latter to form a fascia quite angulated outwards; first hind streak about twice as long as the second costal, irregularly interrupted by black irrorations; third costal streak opposite to second hind one at apical  $\frac{1}{4}$  of wing; second hind streak more oblique and longer than the third costal; remaining streaks usually ill defined. A blotch of black irrorations placed on discal area near apex of wing. A blackish line around apex of wing narrow; cilia pale ochre-gray. Hind wing gray, with cilia pale ochre-gray.

Male genitalia (Fig. 1, A & B) symmetrical. Valva elongate, slightly swollen medi-

1) Kumata, T. 1963. Taxonomic studies on the Lithocolletinae of Japan (Lepidoptera: Gracillariidae). *Ins. Mats.* 25 (2): 53–90; 26 (1): 1–48; 26 (2): 69–88.

anly, bluntly pointed apically, setose on ventral area, with a small projection at apical  $1/3$  of ventral margin, the projection bearing a stout, short apical seta; costal process small, cone-shaped, with a filament-like seta straight and reaching about apical  $1/4$  of valva. Transtilla slender. Saccus about  $1/4$  as long as valva, round apically. Flap-like eighth sternite<sup>2)</sup> a little shorter than valva, elongate-triangular, finely truncated apically. Aedoeagus very long, about 1.3 times as long as valva, tubular, with an acute barb at apex.

Female genitalia (Fig. 1, C-E) symmetrical. Eighth abdominal segment simple, without scales or setae; antapophysis very long, slender, about as long as postapophysis.

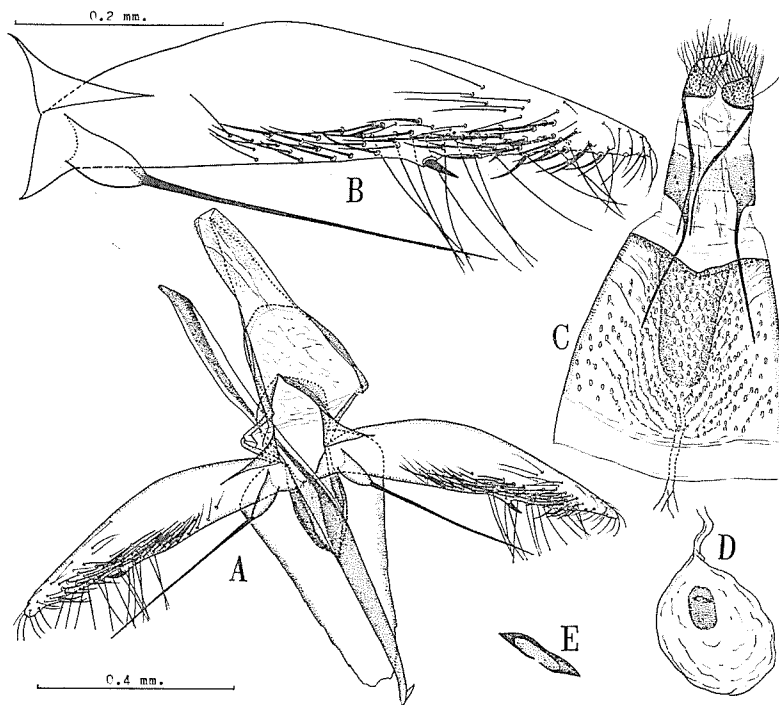


Fig. 1. *Lithocolletis tenebriosa*, sp. nov.

A: male genitalia; B: right valva; C: female genitalia;  
D: corpus bursae; E: projections of signum.

Seventh segment heavily sclerotized in whole, the sternite being shallowly notched medianly on caudal margin, with a few wrinkles which are convergent cephalad. Antrum large, about  $2/3$  as long as seventh segment, slightly narrowed towards round cephalic end. Signum is an elliptical plate with a pair of cone-shaped projections.

Holotype (♂): 19/ix, 1963, Matubara, Nagano-ken, Honsyu, H. Kuroko leg., ex *Corylus heterophylla* var. *thunbergii*. Paratype: 1♀, 16/ix, 1963, the same locality and host as holotype. The types are deposited in the Ent. Lab., Kyusyu University.

2) In my previous papers dealt with members of Lithocolletinae "flap of ninth sternite" or "ninth sternite" is erroneously used for this segment. The flap-like eighth sternite is usually joined with the tegumen at the latero-cephalic ends.

Host plants: *Corylus heterophylla* Fischer var. *thunbergii* Blume (Betulaceae).

This species belongs to the species-group of *rajella*. It is very closely related to *L. carpini* Kumata and *L. ostryae* Kumata, agreeing especially in colour pattern with the autumnal forms of the latter two. The new species is, however, distinguished at once from both *carpini* and *ostryae* by the structure of the valva in the male and by the shape of the antrum in the female as follows:—In *tenebriosa* valva with a small projection, which bears a stout short apical seta, at apical 1/3 of ventral margin, and with usual long setae on ventral area, while in *carpini* valva with usual setae only, and in *ostryae* with a stout, short seta at apex besides usual setae. Antrum gradually

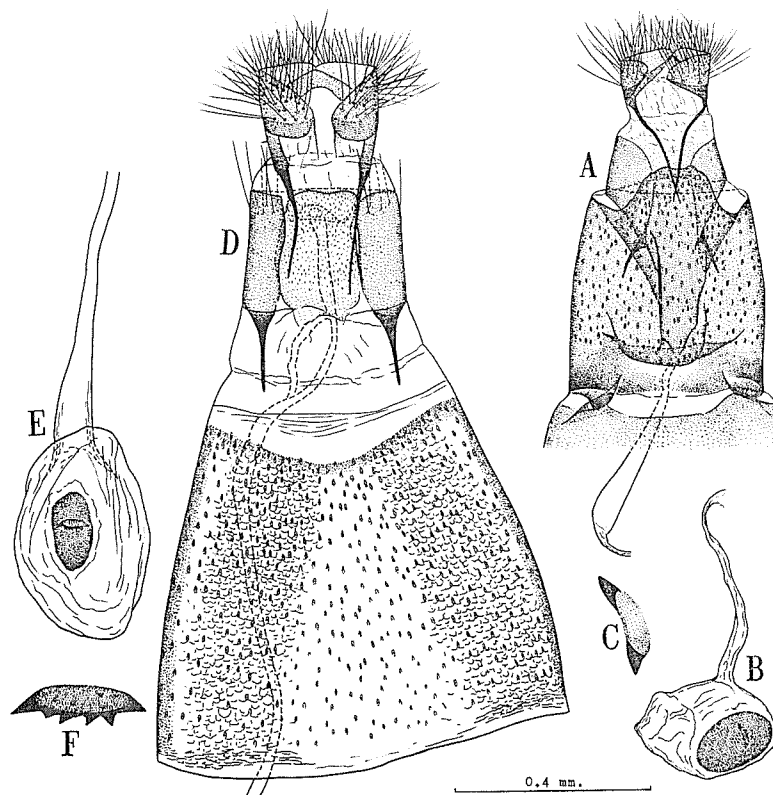


Fig. 2. A-C, *Lithocolletis rostrispinosa* Kumata;  
D-F, *Lithocolletis gigas* Kumata.

A & D: female genitalia; B & E: corpus bursae;  
C & F: projections of signum.

narrowed towards round cephalic end in *tenebriosa*, whereas constricted at middle and truncated at cephalic end in *carpini*, and much swollen at cephalic 1/3 and round at cephalic end in *ostryae*.

***Lithocolletis rostrispinosa* Kumata (Fig. 8, 2)**

*Lithocolletis rostrispinosa* Kumata, 1963, Ins. Mats. 25(2): 87, f. 9; *ibid.*, 1963, op. cit. 26(2): pl. II, f. 16.

This species was originally described from a single male specimen. In this paper will be given a description of the female below.

♀. Differs slightly from male as follows:—Alar expanse a little shorter, 5.5 mm. Hind leg white, the tarsus being ringed with black at basal  $1/3$  and  $2/3$  (the hind leg of the holotype is damaged). White markings of fore wing not margined with dark scales, but in shape and position agreeing well with those of male.

Genitalia (Fig. 2, A–C) symmetrical. Eighth abdominal segment without scales or setae, the sternite prolonged cephalad and inserted deeply into seventh segment; antapophysis short, about  $1/3$  as long as postapophysis. Seventh segment heavily sclerotized in whole, the sternite projecting in a wide, round lamella antevaginalis on caudal margin, with a particular structure near cephalic margin (see fig. 2, A). Antrum weakly sclerotized, widest at caudal end, then suddenly narrowed cephalad, the cephalic end reaching caudal  $4/5$  of seventh sternite. Signum is an elliptical plate with a pair of cone-shaped projections.

Specimens examined: 1 ♀, 8/vi, 1957, Ikoma-yama, Osaka, Honsyu, H. Kuroko leg., ex *Quercus serrata*.

Host plants: *Quercus serrata* Thunb. (Fagaceae).

Distribution: Japan (Honsyu; Kyusyu).

***Lithocolletis jozanae*, sp. nov. (Fig. 8, 3)**

♂ & ♀. Alar expanse, 6.0–7.0 mm. Face, head and palpi shining white; tuft of head whitish, mixed with ochreous hairs antero-laterally. Antenna grayish-white, with an apical segment blackish. Thorax golden-ochreous, with three white stripes. Legs white; fore tibia blackish inside; mid tibia with three blackish, very narrow, oblique stripes on outside; fore tarsus with two black, broad bands; mid and hind tarsi finely spotted with black on apex of the first three segments. Fore wing golden-ochreous, with a medio-basal, a hind-basal, four costal and three hind streaks white, all the costal and hind streaks being internally margined with blackish scales. Medio-basal streak long, occupying basal  $2/5$  of wing in parallel with costa, slightly sinuate, margined with brownish black on its whole upper edge and near apex of lower edge; hind-basal streak a little shorter than the medio-basal, very narrow. First costal and hind streaks opposite at middle of wing, moderately oblique outwardly, quadrangular or rarely hook-shaped, separated from each other by a narrow line of ground colour; second streaks also opposite at apical  $2/5$  of wing or just before tornus, vertical, the hind one being triangular, and the costal wedge-shaped; remaining streaks smaller, wedge-shaped. A black-irrorated, short streak situated on disc between apex of last hind streak and apex of wing. A blackish line around apex of wing narrow; cilia pale ochre-gray. Hind wing pale gray, with cilia pale ochre-gray.

Male genitalia (Fig. 3, A) asymmetrical in tegumen and valvae. Right side of tegumen about 1.5 times as long as the left. Right valva large, bag-shaped, sparsely setose on inner surface, two or three setae near apex of ventral margin being stout and spiniform; left valva very slender, less than  $1/4$  width of the right, but about as long as the right, slightly widened basally and apically, setose as in the right; both costal processes symmetrical, rather large, with a filament-like seta upcurved, and about as long as costal process. Saccus very short, about  $1/7$  as long as valva, round apically. Flap-like eighth sternite a little shorter than valva, elongate-trapezoid, with its apical

margin straight or slightly convex at middle. Aedoeagus a little shorter than valva, tubular, with a small, round apical barb.

Female genitalia (Fig. 3, B-E) symmetrical. Eighth abdominal segment wide, not covered with scales or setae; antapophysis short, about half as long as postapophysis, which is slightly widened on caudal 1/3. Seventh segment weakly sclerotized as in other segments. Antrum small, ring-shaped, with caudal margin smooth. Signum in an oval plate with a pair of cone-shaped projections.

Holotype (♂): 15/viii, 1961, Ebetu, Hokkaido, T. Kumata leg., ex *Crataegus jozana*. Paratypes: 1♂, 6/vii, 1959, and 5♂♂ & 2♀♀, 15/viii, 1961, the same locality and host

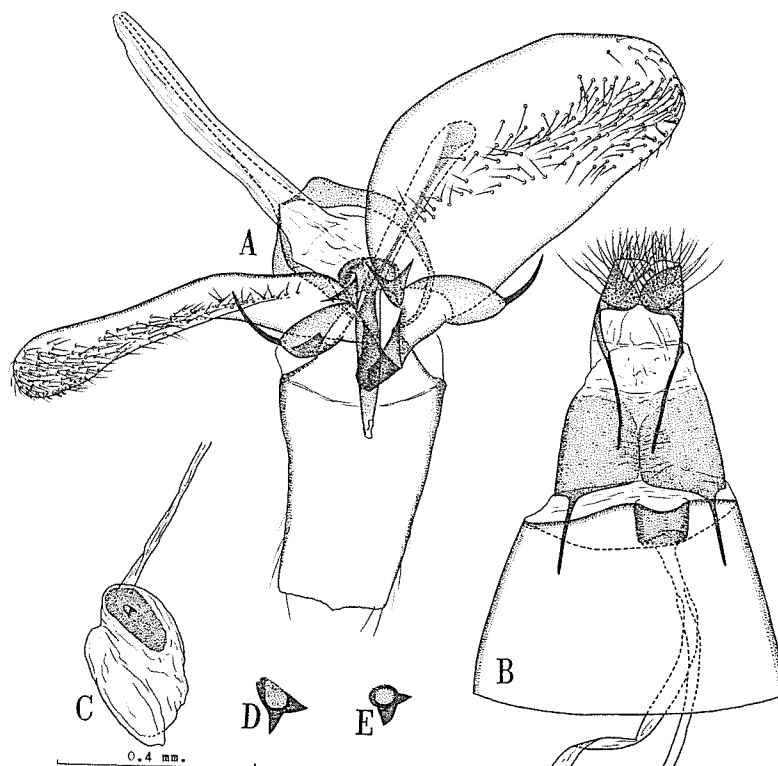


Fig. 3. *Lithocolletis jozanae*, sp. nov.

A: male genitalia; B: female genitalia; C: corpus bursae;  
D & E: projections of signum.

as holotype; 1♂ & 1♀, 25-26/v, 1961, Sapporo, Hokkaido, N. Okabe leg. The types are deposited in the Ent. Inst., Hokkaido University.

Host plants: *Crataegus jozana* C. K. Schn. (Rosaceae).

This species belongs to the species-group of *rajella*. In general appearance it is closely related to *L. watanabei* Kumata, a leaf-miner of *Pourthiaea*, but is distinguished from the latter by the more oblique white streaks of the fore wing, by the asymmetrical valvae, and by the smooth caudal margin of the antrum. From any other hawthorn-feeders of *Lithocolletis*, namely *L. oxyacanthae* Frey and *L. corylifoliella* Hübner in

Europe, *L. malella* Gerasimov in Central Asia and *L. crataegella* Clemens in North America, the new species is also easily distinguished by the asymmetrical valvae and by the symmetrical costal processes.

***Lithocolletis yakusimensis*, sp. nov.** (Fig. 8, 4)

♂ & ♀. Alar expanse, 9.0–9.5 mm. Face, head and palpi shining white; tuft of head ochreous, mixed with slightly paler hairs centrally. Antenna pale grayish, spotted with dark brown above, the spots becoming indistinct towards base and apex. Thorax golden-ochreous, with three white stripes, of which the median one is usually obsolescent anteriorly. Legs shining white; fore tibia blackish inside; mid tibia with two blackish, slender, oblique streaks on outside; tarsi with two blackish, broad rings at both basal  $1/3$  and  $2/3$ . Fore wing golden-ochreous, with a medio-basal streak, a hind spot near base, four costal and two hind streaks shining white and rather slender; all costal and hind streaks internally, the latter also externally near their apices, margined with blackish scales. Medio-basal streak for  $2/5$  of wing length, bent upwardly at its apical  $1/4$ , finely margined with dark brown above; hind spot variable in size, sometimes narrowly connected with base of wing along hind margin. First costal streak placed at middle of wing, rather short, very oblique outwardly; second and third costal streaks about as long as the first costal, vertical; fourth costal streak very small, almost obsolete. First hind streak opposite to first costal one, about twice as long as the latter, moderately oblique outwardly, with its pointed apex bent outwardly and nearly reaching apex of second hind one, which is situated just before tornus in parallel with the first. A black-irrorated, small spot placed near middle of termen, sometimes mixed with a few shining white scales centrally. A blackish apical spot small, oval. A dark line around apex of wing narrow; cilia pale ochreous to pale yellowish-gray. Hind wing gray, with cilia pale yellowish-gray.

Male genitalia (Fig. 4, A) symmetrical. Valva elongate, straight or slightly arched upwardly, slightly widened near apex, setose on inner surface, the setae around apex being very thickly clustered and those along apex of ventral margin in a long tuft; costal process absent. Transtilla narrow, slightly widened laterally. Saccus a little longer than  $1/4$  length of valva, round apically. Flap-like eighth sternite about as long as valva, spatular in shape. Aedoeagus about 1.3 times as long as valva, tubular, with a small, acute apical barb.

Female genitalia (Fig. B–E) symmetrical. Eighth abdominal segment short, covered with long scales on whole sclerotized area; antapophysis about as long as postapophysis, which is slightly widened on the basal half. Seventh segment well sclerotized, covered with imbricate sculptures on whole surface, the sternite being notched at middle of caudal margin. Ductus bursae wholly membranous, without sclerotized antrum. Signum is an elliptical plate with a few minute, cone-shaped projections.

Holotype (♂): 10/vi, 1965, Kosugidani, Yaku-sima, near Kyusyu, T. Kumata leg., ex *Rhododendron tashiroi*. Paratypes: 11♂♂ & 15♀♀, 7/vi–1/vii, 1965, the same locality and host as holotype. The types are deposited in the Ent. Inst., Hokkaido University.

Host plants: *Rhododendron tashiroi* Maxim. (Ericaceae).

This species belongs to the species-group of *ulmifoliella*. It may be related to *L. ringoniella* Matsumura, a leaf-miner of apple in Japan, but is immediately distinguished from the latter by the larger size (alar expanse, 9.5 : 7.0 mm. in average), by the fore

wing with the first costal streak never extending to the base, by the valva with a round apex and without a very long, string-like seta near the apex, by the ductus bursae without sclerotized antrum, and by the sclerotized seventh abdominal segment of the female with imbricate sculptures on the whole surface. So far as I am aware, two other

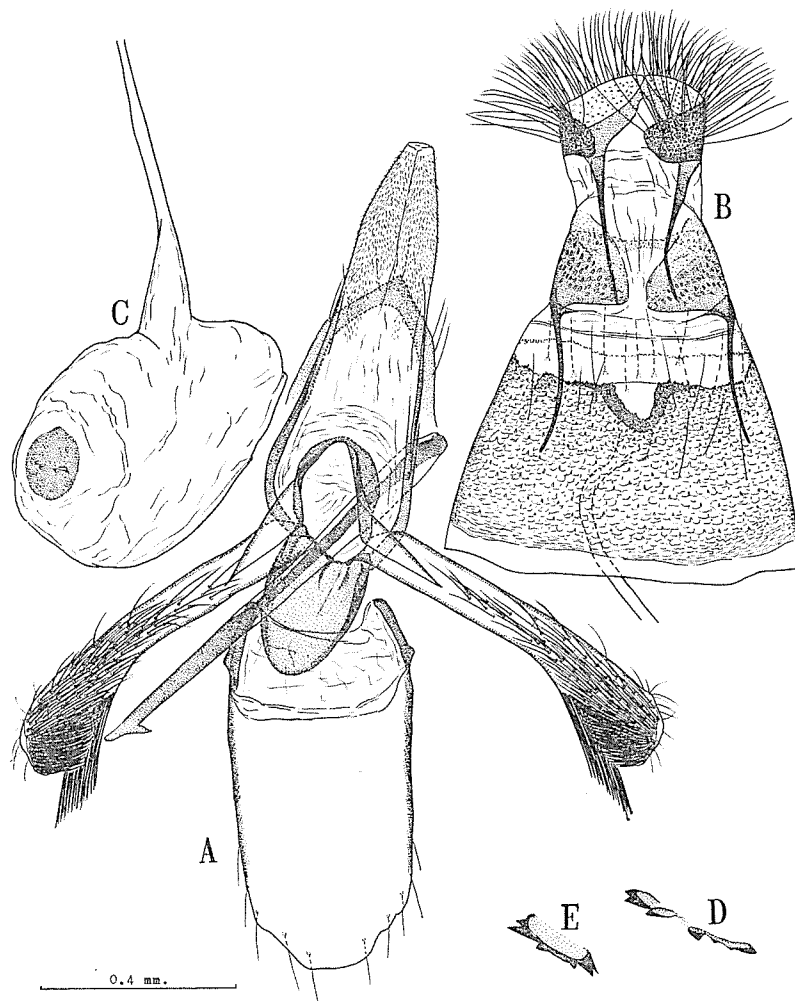


Fig. 4. *Lithocolletis yakusimensis*, sp. nov.

A: male genitalia; B: female genitalia; C: corpus bursae;  
D & E: projections of signum.

species of *Lithocolletis* are known to attack the leaf of *Rhododendron*-trees, that is, *L. melacoronis* Kumata of Japan and *L. rhododendrella* Braun of North America. The new species is also distinguished from those two in the colouration of the head, thorax and fore wing.



***Lithocolletis gigas* Kumata**

*Lithocolletis gigas* Kumata, 1963, Ins. Mats. 26 (1): 46, f. 27; *ibid.*, 1963, op. cit. 26 (2): pl. IV, f. 50.

The original description of this species is based on only one male specimen. Through the kindness of Mr. T. Yasuda I have had a chance to examine three female specimens. On this occasion will be given a description of the female in the following lines.

♀. Differs very slightly from male as follows:—Alar expanse a little shorter, 10.5 mm. Apical segment of antenna dark gray. Thorax with two indistinct, whitish stripes along inner margins of tegulae.

Genitalia (Fig. 2, D-F) symmetrical. Eighth abdominal segment oblong, with 12–16 slender setae near caudal margin; antapophysis widened towards base, a little longer than  $1/3$  length of postapophysis, which is also widened on basal half. Seventh segment heavily sclerotized, the sternite with imbricate sculptures on each lateral surface. Lamella antevaginalis lying on ventrum of eighth segment, oblong, about as long as eighth segment, densely spinose, with its caudal margin sinuate; ductus bursae wholly membranous, without sclerotized antrum. Signum is an elliptical plate with a few minute, spine-like projections.

Specimens examined: 1♀, 21/vi, 1932, Yumoto, Totigi-ken, Honsyu, S. Issiki leg.; 1♀, 12/vii, 1953, Sigakôgen, Nagano-ken, Honsyu, A. Mutuura leg.; 1♀, 7/vii, 1962 Tokugô-tôge, Nagano-ken, S. Moriuti leg.

Host plants: Unknown.

Distribution: Japan (Honsyu).

This species is closely related to *L. longispinata* Kumata and *L. takagii* Kumata in the female genitalia, but is characterized by the lamella antevaginalis which is very long and sinuate on the caudal margin.

***Lithocolletis laciniatae*, sp. nov. (Fig. 8, 5)**

*Lithocolletis tristrigella*: Kumata, 1963, Ins. Mats. 26 (1): 6, fs. 2 & 4; *ibid.*, 1963, op. cit. 26 (2): pl. V, f. 57 (nec Haworth, 1828).

♂ & ♀. Alar expanse, 6.5–7.5 mm. Face and head brilliant white; tuft of head pale golden-ochreous. Palpi white; labial palpus with a blackish line on outside. Antenna whitish, annulated with blackish brown, the annulations diminishing apically and sometimes absent on eight to ten segments from apex. Thorax golden-brown, with two silvery-white stripes. Legs grayish-white; fore tibia blackish inside; mid tibia with three broad, blackish, oblique streaks on outside; hind tibia dark gray outside; all tarsal segments ringed with black apically. Fore wing golden-brown, with a medio-basal spot, three vertical fasciae and a costal streak silvery-white, the fasciae being internally margined with black. Medio-basal spot very small, without dark marginal scales. First fascia placed at basal  $1/4$  of wing, straight or slightly arched outwardly; second fascia placed just before middle of wing in parallel with the first; inner dark margins of these two fasciae conspicuously widened near costa, forming triangular, blackish costal blotches. Last fascia placed at apical  $1/4$  of wing, narrowed at its middle, sometimes separated widely. Costal streak near apex of wing situated in parallel with termen, usually bordered with a black-irrorated apical streak on its hind margin, with its apex more or less touching middle of last fascia. A dark line around apex of wing absent;

cilia pale ochreous to pale gray. Hind wing gray, with cilia pale gray.

Male genitalia (Fig. 5, A-C) symmetrical. Valva rather short, setose on inner surface, the costal margin being round, the ventral margin nearly straight on basal 2/3, then very shallowly concave on remaining apical 1/3, and the apex very sharply pointed

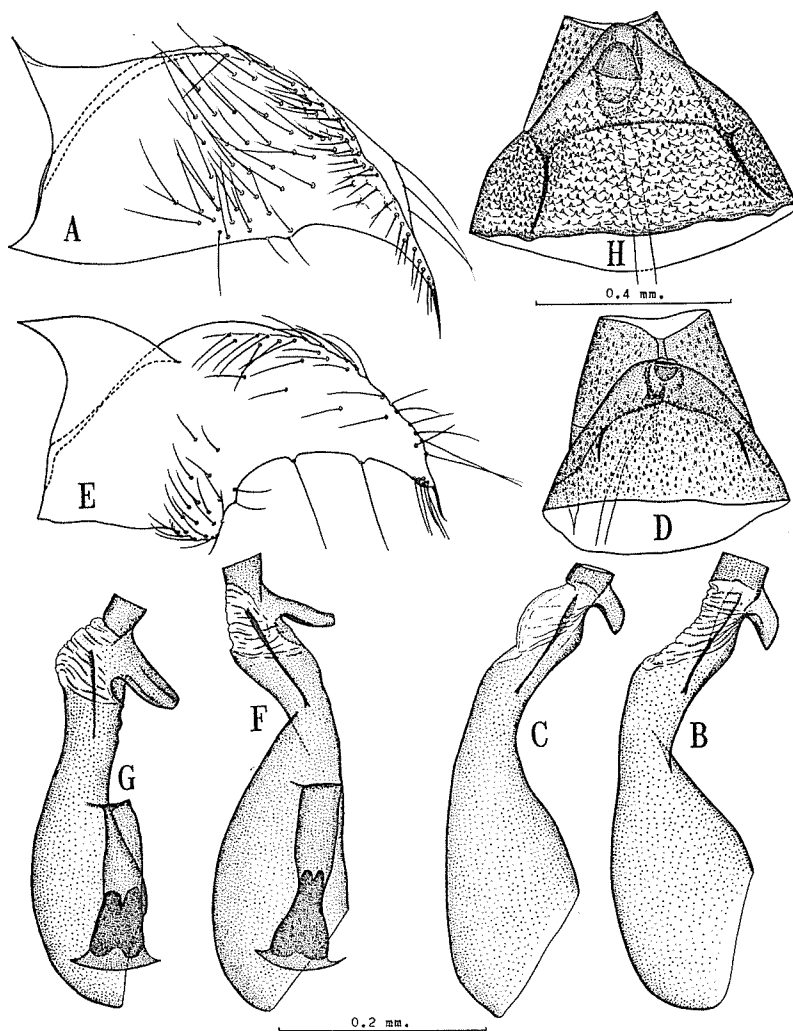


Fig. 5. A-D, *Lithocolletis laciniatae*, sp. nov.;  
E-H, *Lithocolletis tristrigella* (Haworth).

A & E: right valva; B & C: aedoeagus; F & G: aedoeagus and juxta; D & H: seventh and eighth abdominal segments of female.

downwards, with a long spine; costal process absent. Transtilla slender, parallel-sided. Saccus very short, less than 1/7 length of valva. Flap-like eighth sternite a little shorter than valva, spatular in shape, with its round terminal margin slightly incised medianly. Aedoeagus about as long as valva, slightly bent at middle, strongly swollen on basal

half, with a small, inwardly curved projection near apex of lower side; juxta entirely slender.

Female genitalia (Fig. 5, D) symmetrical. Eighth abdominal segment covered with normal scales on whole surface, widened cephalad, tightly fused with seventh segment; antapophysis shorter than  $1/5$  length of postapophysis. Seventh segment heavily sclerotized, the sternite being widely produced caudad, without imbricate sculptures. Ostium bursae opened on top of projecting seventh sternite; sterigma small, semicircular; ductus bursae wholly membranous, without sclerotized antrum. Signum is an oval plate with a pair of cone-shaped projections.

Holotype ( $\delta$ ): 17/vii, 1959, Sapporo, Hokkaido, T. Kumata leg., ex *Ulmus laciniata*. Paratypes: 2 $\delta\delta$ , 11/iv, 1959, and 7 $\delta\delta$  & 1 $\varphi$ , 17-21/vii, 1959, the same locality and host as holotype. The types are deposited in the Ent. Inst., Hokkaido University.

Host plants: *Ulmus laciniata* Mayr. (Ulmaceae).

Distribution: Japan (Hokkaido).

This species was misidentified with *L. tristrigella* Haworth in my previous paper. Recently, by courtesy of Mr. G. Deschka of Austria I have examined six specimens (1 $\delta$  & 2 $\varphi\varphi$ , 13-22/vii, 1963, and 3 $\delta\delta$ , 14-22/iv, 1964, Steyr 285 m., Austria, ex *Ulmus scabra*) determined as *tristrigella*. After my careful examination I have come to the conclusion that the present species should be distinct, being separated from *tristrigella* by the valva with its ventral margin very shallowly concave on the apical  $1/3$ , by the aedoeagus with an inwardly curved, short projection near the apex, and by the seventh sternite of the female not covered with imbricate sculptures.

***Lithocolletis bifurcata*, sp. nov. (Fig. 8, 7)**

$\delta$ . Alar expanse, 5.5 mm. Face, head and palpi white; tuft of head whitish, mixed with ochreous hairs antero-laterally. Antenna spotted above with dark brown. Thorax golden-ochreous, with two white stripes. Legs whitish; mid tibia with three blackish, oblique streaks on outside; hind tibia clouded outside; tarsi with two blackish bands at both basal  $1/3$  and  $2/3$ . Fore wing golden-ochreous, with a medio-basal streak and three broad fasciae white, the fasciae being internally margined with blackish irrorations. Medio-basal streak very short, at most occupying basal  $1/8$  of wing, straight, without dark marginal scales. First fascia placed at basal  $1/4$  of wing, very slightly oblique inwardly, straight, with dark internal margin obsolete; second fascia at middle of wing, vertical, very slightly arched outwardly; third fascia at apical  $1/4$  of wing, narrowed and separated by blackish irrorations near costa, thus forming opposite triangular streaks; an ill-defined, whitish spot situated on upside of blackish-irrorated apical blotch. A dark line around apex of wing narrow; cilia pale ochreous to pale gray. Hind wing and its cilia pale gray.

Genitalia (Fig. 6) asymmetrical in valvae. Right valva about  $1/3$  as wide as long at middle, suddenly narrowed on apical  $2/5$ , irregularly dentate on apical margin and on apical  $2/5$  of costal margin, finely setose on inner surface, with a very long, thickened seta near middle of costa; left valva a little shorter than the right, gradually narrowed apically, dentate and setose like the right, with a long seta situated more apically and shorter than that of the right; costal process absent in both valvae. Transtilla slender. Saccus wide, about  $1/4$  as long as right valva. Flap-like eighth sternite  $2/3$  as long as right valva, elongate-trapezoid in shape, with its terminal margin sinuate. Aedoeagus

about 1.2 times as long as right valva, slender, strongly curved, slightly swollen on basal 1/4, bifurcated at middle, the lower arm being slenderer than and about half as long as the upper; juxta heavily sclerotized, slender.

Holotype (♂): 16/vii, 1954, Hikosan, Kyusyu, H. Kuroko leg., ex *Celtis sinensis*. The type is deposited in the Ent. Lab., Kyusyu University.

Host plants: *Celtis sinensis* Pers. (Ulmaceae).

This species belongs to the species-group of *trifasciella*. It is immediately distinguished from *L. celtidis* Kumata, which is another leaf-miner of *Celtis sinensis* in Japan, by the fore wing with three broad, whitish fasciae, by the asymmetrical valvae, and by the aedoeagus bifurcated at the middle.

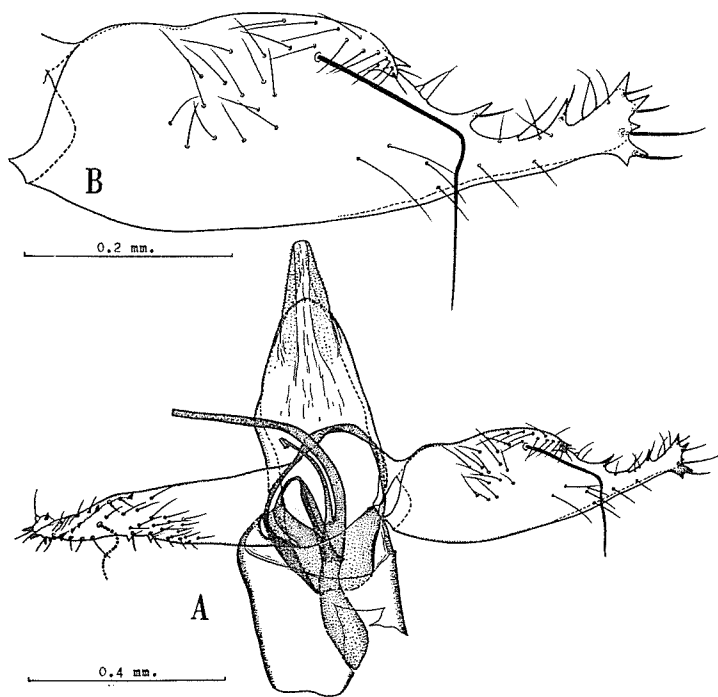


Fig. 6. *Lithocolletis bifurcata*, sp. nov.

A: male genitalia; B: right valva.

***Lithocolletis stephanandrae*, sp. nov. (Fig. 8, 8)**

♂ & ♀. Alar expanse, 6.0–7.0 mm. Face brilliant white, dark golden-brownish on anterior extremity; tuft of head brownish. Palpi ochre-white. Antenna whitish, annulated with black except for seven or eight segments from apex. Thorax golden-brownish, with two silvery-white stripes. Legs ochre-whitish; fore tibia blackish inside; mid tibia with three blackish, oblique streaks on outside; hind tibia slightly clouded outside; fore and mid tarsi with two blackish, broad bands; hind tarsus with three blackish spots on upside. Fore wing golden-brownish, slightly reddish-tinged, with a medio-basal spot, two vertical fasciae, a wedge-shaped costal streak, a triangular hind

streak and an apical spot, all of which are silvery-white. Medio-basal spot very small, without dark marginal scales. Two fasciae, one being placed at basal 1/4 of wing and the other at middle, slender, straight or very slightly arched outwardly, internally margined with blackish irrorations. Costal and hind streaks opposite at apical 1/4 of wing, vertical, internally margined with blackish irrorations, the costal being a little shorter than the hind. Apical spot surrounded with blackish scales, prolonged, lying in parallel with termen. A dark line around apex of wing absent; cilia pale ochreous to pale gray. Hind wing gray, with cilia pale gray.

Male genitalia (Fig. 7, A-D) symmetrical. Valva rather short, wide-quadrangular on basal half, then suddenly narrowed in a curved finger-shape, setose on inner surface; costal process absent. Transtilla much widened on latero-cephalic areas. Saccus wide, about 1/4 as long as valva. Flap-like eighth sternite as long as valva, quadrangular, with its terminal margin sinuate. Aedoeagus about 1.3 times as long as valva, rather

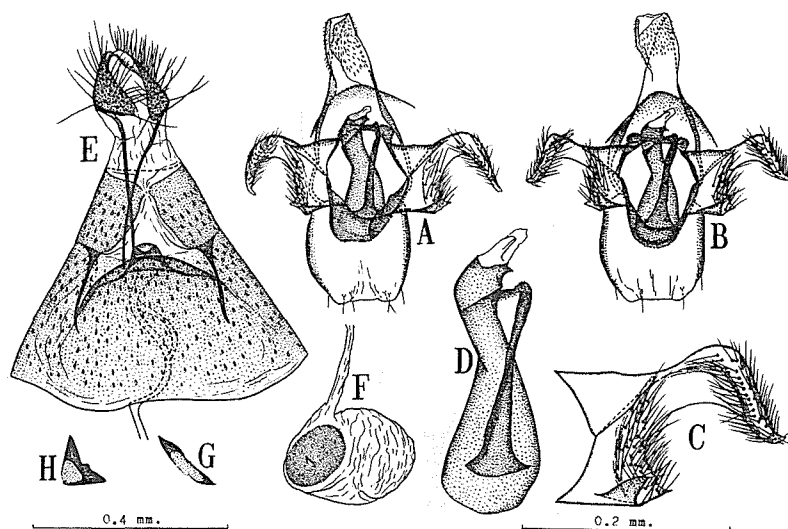


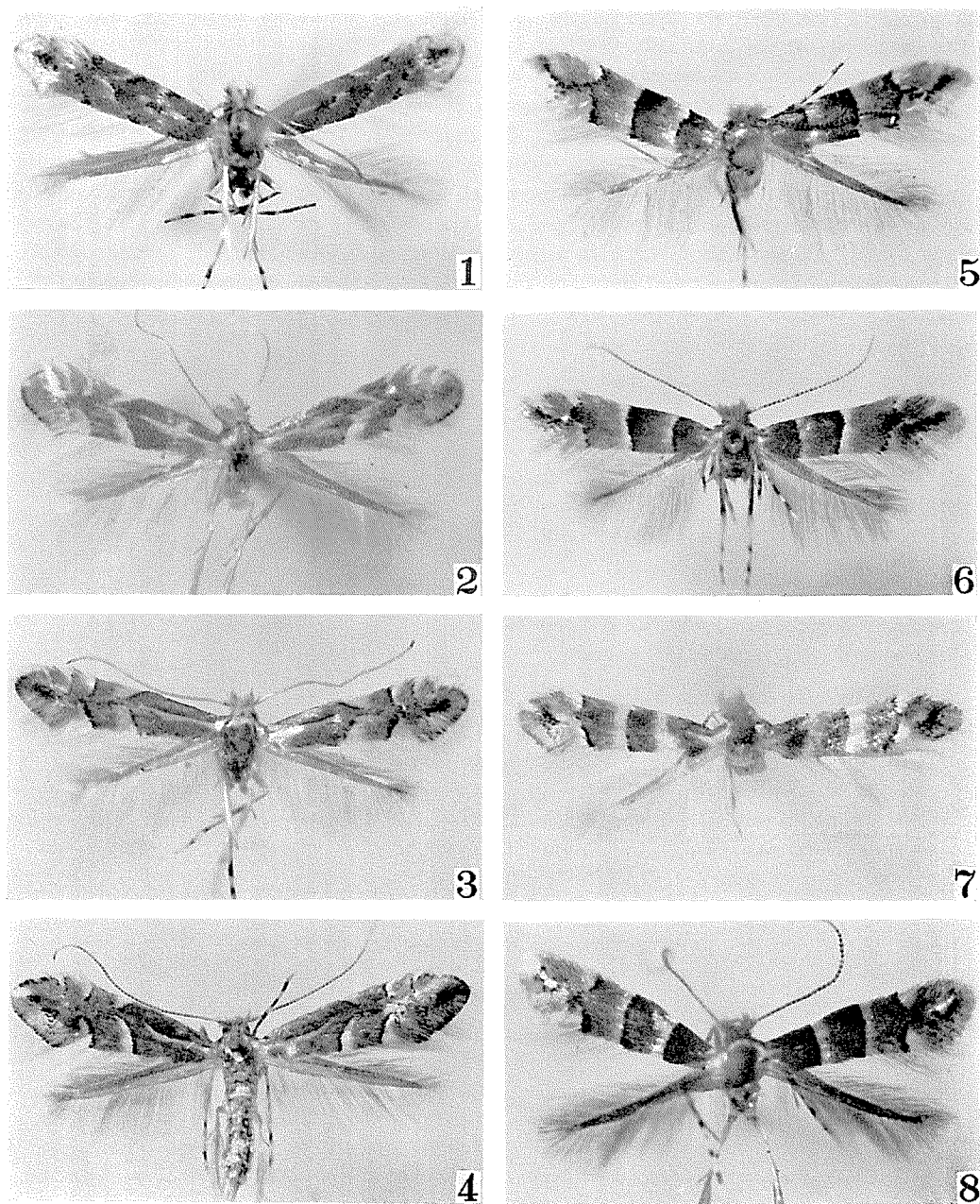
Fig. 7. *Lithocolletis stephanandrae*, sp. nov.

A & B: male genitalia; D: aedoeagus and juxta; E: female genitalia; F: corpus bursae; G & H: projections of signum.

thick, slightly swollen on basal half, with a minute, acute projection at apex; juxta heavily sclerotized, slender, finely spinose on apical area.

Female genitalia (Fig. 7, E-H) symmetrical. Eighth abdominal segment covered with normal scales on whole surface, widened cephalad, tightly fused with seventh segment; antapophysis about half as long as postapophysis, which is very slender. Seventh segment heavily sclerotized, the sternite being slightly produced caudad, and round on caudal margin. Ostium bursae opened on top of projecting seventh sternite; sterigma small, ring-shaped, usually projecting beyond caudal margin of seventh sternite. Signum is an elliptical-plate with a pair of minute, cone-shaped projections.

Holotype (♂): 27/iv, 1964, Matubara, Nagano-ken, Honsyu, H. Kuroko leg., ex *Stephanandra incisa*. Paratypes: 1♂ & 2♀♀, 9/v, 1964, the same locality and host as

Fig. 8. *Lithocolletis* spp.

1: *L. tenebriosa*, sp. nov. (holotype); 2: *L. rostrispinosa* Kumata (female); 3: *L. jozanae*, sp. nov. (holotype); 4: *L. yakusimensis*, sp. nov. (paratype, female); 5: *L. laciniatae*, sp. nov. (paratype, female); 6: *L. tristrigella* (Haworth) (male, Austria); 7: *L. bifurcata*, sp. nov. (holotype); 8: *L. stephanandrae*, sp. nov. (paratype, female).

holotype. The types are deposited in the Ent. Inst., Hokkaido University, excepting two paratypes in the Ent. Lab., Kyusyu University.

Host plants: *Stephanandra incisa* Zabel (Rosaceae).

This species belongs to the species-group of *trifasciella*. It is closely related to *L. zelkovae* Kumata in colour, from which it differs in the following aspects:—Fore wing with third silvery-white fascia usually becoming a pair of spots, and with a silvery-white apical spot situated in disc; valva rather short, the basal half being wide-quadrangular, the apical half narrow finger-shaped, and the apex without an acute, long spine; aedoeagus usually longer than valva, with a minute, acute projection at apex; female seventh sternite a little produced caudad, but never reaching caudal margin of eighth abdominal segment; sterigma ring-shaped, usually projecting beyond caudal margin of seventh sternite.

***Lithocolletis sorbicola* Kumata**

*Lithocolletis sorbicola* Kumata, 1963, Ins. Mats. 26(1): 14, f. 9; *ibid.*, 1963, op. cit. 26(2): pl. II, f. 22.

On the basis of the present specimens the cherry-tree, *Prunus avium*, is added to the host list of this species for the first time.

Specimens examined: 3♀, 18/viii, 1962, Kotoni, Hokkaido, T. Oku leg., ex *Prunus avium*.

Host plants: *Prunus avium* Linné, *Sorbus alnifolia* C. Koch, *Sorbus commixta* Hedl. and *Sorbus matsumurana* Koehne (Rosaceae).

Distribution: Japan (Hokkaido).

***Lithocolletis loniceræ* Kumata**

*Lithocolletis loniceræ* Kumata, 1963, Ins. Mats. 26(1): 40, f. 23; *ibid.*, 1963, op. cit. 26(2): pl. V, f. 59.

On this occasion I will give Yaku-sima, an island near Kyusyu, as a locality of this species for the first time.

Specimens examined: 2♂♂ & 1♀, 15–25/vi, 1965, Anbo, Yaku-sima, T. Kumata leg., ex *Lonicera japonica*.

Host plants: *Lonicera japonica* Thunb. (Caprifoliaceae).

Distribution: Japan (Honsyu; Sikoku; Kyusyu; Yaku-sima).

### Emendations

Kumata, T.: Taxonomic studies on the Lithocolletinae of Japan (Lepidoptera: Gracillariidae), part II. Ins. Mats. 26 (1963): p. 19, line 13 from top; p. 26, line 5 from top; p. 36, line 11 from top; p. 37, line 5 from bottom; p. 41, line 15 from bottom; and p. 42, line 9 from bottom, for “hardly” read “strongly”.

———: Descriptions of twenty new species of the genus *Caloptilia* Hübner from Japan including the Ryukyu islands (Lepidoptera: Gracillariidae). Ins. Mats. 29 (1966): p. 4, line 9 from top and line 4 from bottom, p. 5, lines 11 and 12 from bottom, p. 6, line 23 from top, p. 12, lines 5 and 7 from bottom, and p. 16, line 11 from bottom, for “hardly” read “strongly”; p. 7, line 8 from top, for “borwn” read “brown”; p. 8, line 19 from top, for “Fig. 30” read “Fig. 32”; p. 13, line 15 from top, for “XVIII” read “XVII”; and p. 17, line 17 from bottom, for “posterior” read “anterior”.

———: Notes on some *Lithocolletis*-moths occurring in Japan (Lep., Gracillariidae). Ins. Mats. 29 (1966): p. 22, line 6 from bottom, for “*Lti*hocolletis” read “*Lithocolletis*”.